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the image data processed by the host computer.

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REMARKS

This application has been reviewed in light of the Office Action dated March 28, 2001. Claims 1-15 remain pending in this application, with Claims 1-3, 7, and 11-15 having been amended to define more clearly what Applicant regards as his invention. Claims 1, 7, and 11-15 are in independent form. Favorable reconsideration is requested.

The Office Action rejected Claims 1-13 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,923,834 (Thieret et al.). Claims 14 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thieret et al. in view of U.S. Patent No. 5,862,326 (Bapat). Applicant submits that independent Claims 1, 7, and 11-15, together with the claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is directed to an image processing apparatus. The image processing apparatus includes a communicator for performing two-way communications with an image output unit. The image output unit includes an update unit for updating condition information indicating a condition of the image output unit, and a memory for storing the condition information. The condition information is obtained by forming color patches and measuring colors on the color patches.

The image processing apparatus also includes an input unit for inputting an image output instruction, an acquisition unit for acquiring, in response to the image output

instruction, the condition information stored in the image output unit by utilizing the two-way communications, and an image processor for performing image processing of image data in accordance with the acquired condition information. A data output unit of the image processing apparatus outputs the image data processed by the image processor to the image output unit using the communicator, in order to make the image output unit output an image.

One important feature of Claim 1 is that the image processing apparatus performs image processing on image data in accordance with condition information acquired from an image output unit in response to an image output instruction, and then outputs the processed image data to the image output unit. By virtue of this feature, the image processing apparatus can perform image processing using the latest condition information whenever an output instruction is inputted. Because the latest condition information of the image output unit is used by the image processing apparatus to process image data for the image output unit, the image output unit is able to output an image of good quality.

Thieret et al., as understood by Applicant, relates to a server for monitoring a machine and providing a corrective response to the machine. Apparently, Thieret et al. teaches that the server performs diagnostics of the machine, and generates trend data, fault prediction data, and corrective data.

Nothing has been found in Thieret et al. that is believed to teach or suggest an image processing apparatus that includes "an acquisition unit for acquiring the condition information stored in the image output unit by utilizing the two-way communications, in response to the image output instruction," and "an image processor for performing image

processing of image data in accordance with the condition information acquired by said acquisition unit" and providing the processed image data to the image output unit, as recited in Claim 1. As evident from Fig. 1 of Thieret et al., the image processing system 14 is part of the printing system of Fig. 1. Thus, Thieret et al. is understood by Applicant to teach a conventional printer system, in which an *internal* calibration is performed to correct a change in condition of the printer system. The image processing system 14 does not perform two-way communications to acquire condition information from an external image output unit in response to an image output instruction, as claimed in Claim 1. Accordingly, Applicant submits that Claim 1 is not anticipated by Thieret et al., and respectfully requests withdrawal of the rejection under 35 U.S.C. § 102(e).

Independent Claims 12 and 14 are method and storage medium claims corresponding to Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. Additionally, independent Claim 11 includes the same feature of acquiring condition information from an external image output unit in response to an image output instruction, as discussed above in connection with Claim 1. Accordingly, Claim 11 is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

The aspect of the present invention set forth in Claim 7 is directed to an image processing apparatus connected, via a communication network, with a host computer and a plurality of image output units. Each image output unit has a function of updating condition information of the image output unit. The condition information is obtained by forming color

patches and measuring colors on the color patches.

The apparatus includes an input unit for inputting the condition information updated by the plurality of image output units, and a memory for storing the inputted condition information in association with each of the plurality of image output units. A transmitter of the apparatus transmits the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer, and a management unit of the apparatus manages an image output job of the host computer. The host computer performs image processing of image data in accordance with the condition information transmitted by the transmitter, and each of the plurality of image output units outputs an image based on the image data processed by the host computer.

One important feature of Claim 7 is that the image processing apparatus transmits stored condition information regarding an image output unit to the host computer upon a request by the host computer. The host computer uses the condition information to perform image processing on image data, and the processed image data is used by the image output unit to output an image. By virtue of this feature, the host computer uses the latest condition information for an image output unit to process image data to be used by that image output unit to output an image of good quality.

Bapat, as understood by Applicant, relates to a request-reply protocol for client-server communications. The Office Action cited Bapat for teaching the "use of a computer readable medium for storing a program to control the operation of the apparatus of claims 1, and 7."

Applicant submits that a combination of Thieret et al. and Bapat, assuming such combination would even be permissible, would fail to teach or suggest an image processing apparatus that includes "a memory for storing the inputted condition information in association with each of the plurality of image output units," and "a transmitter for transmitting the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer," "wherein the host computer performs image processing of image data in accordance with the condition information transmitted by said transmitter," as recited in Claim 7.

As discussed above in connection with Claim 1, Thieret et al. is understood by Applicant to teach a conventional printer system, in which an *internal* calibration is performed to correct a change in condition of the printer system. The image processing system 14 does not store condition information for a plurality of external image output units, and does not transmit condition information for those image output units in response to a request from a host computer, as claimed in Claim 7. Bapat is silent regarding such a feature. Accordingly, Applicant submits that Claim 7 is patentable over the cited art, and respectfully requests withdrawal of the rejection under 35 U.S.C. § 103(a).

Independent Claims 13 and 15 are method and storage medium claims corresponding to Claim 7, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 7.

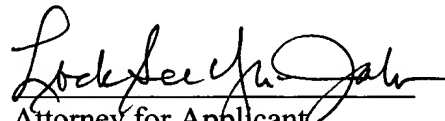
The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at least the

same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

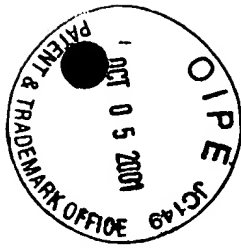
In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

  
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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Thrice Amended) An image processing apparatus comprising:

a communicator for performing two-way communications with an image output unit that includes an update unit for updating condition information indicating a condition of the image output unit and a memory for storing the condition information, wherein the condition information is obtained by forming color patches and measuring colors on the color patches;

an input unit for inputting an image output instruction;

an acquisition unit for acquiring the condition information stored in the image output unit by utilizing the two-way communications, in response to the image output instruction; [and]

an image processor for performing image processing of image data in accordance with the condition information acquired by said acquisition unit; and

a data output unit for outputting the image data processed by said image processor to the image output unit using said communicator in order to make said image output unit output an image.

2. (Twice Amended) The apparatus according to claim 1, wherein the image output unit [comprises] further includes:

an engine unit; and

a condition acquisition unit for automatically acquiring the condition information in accordance with a change in status of the engine unit[; and  
a storage unit for storing], wherein the acquired condition information is stored in the memory.

3. (Twice Amended) The apparatus according to claim 1, wherein the condition information is a measurement result of a plurality of patches [output] outputted by the image output unit.

7. (Thrice Amended) An image processing apparatus connected, via a communication network, with a host computer and a plurality of image output units, each image output unit having a function of updating condition information of the image output unit, the condition information being obtained by forming color patches and measuring colors on the color patches, said apparatus comprising:

an input unit for inputting the condition information updated by the plurality of image output units;

a memory for storing the inputted condition information in association with each of the plurality of image output units;

a transmitter for transmitting the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host

computer; and

a management unit for managing an image output job of the host computer,

wherein the condition information is obtained by forming color patches and measuring colors on the color patches,

wherein the host computer performs image processing of image data in accordance with the condition information transmitted by said transmitter, and

wherein each of the plurality of image output units outputs an image based on the image data processed by the host computer.

11. (Thrice Amended) An image processing method for performing image processing in a network system to which an image output apparatus, a server, and a network terminal are connected, said method comprising:

in the image output apparatus:

a condition measurement function of updating condition information by forming color patches and measuring colors on the color patches; and

a notification function of notifying the server of the updated condition information,

in the server:

a storage function of storing the updated condition information notified from the image output apparatus in correspondence with a type of the image output apparatus;

and

a management function of managing an image output job, and

in the network terminal:

an input function of inputting an image output instruction of a user;

an acquisition function of acquiring the updated condition information

stored in the server in response to the image output instruction; [and]

an image processing function of performing image processing using an image processing condition in accordance with the updated condition information; and

an output function of outputting image data processed in said image processing function to the image output apparatus in order to make the image output apparatus output an image.

12. (Thrice Amended) An image processing method [for making an image output unit output an image, wherein the image output unit includes an update unit for] performed in a server connected, via a communication network, with a host computer and a plurality of image output units, each image output unit having a function of updating condition information indicating a condition of the image output unit [and a memory for storing the condition information], said method comprising [the steps of]:

an input step of inputting an image output instruction;

an acquisition step of acquiring the condition information stored in the image

output unit by utilizing two-way communications, in response to the image output instruction;  
[and]

an image processing step of performing image processing of image data in  
accordance with the condition information acquired in said acquiring step; and

an output step of outputting the image data processed in said image processing  
step to the image output unit using the communication network in order to make the image  
output unit output an image,

wherein the condition information is obtained by forming color patches and  
measuring colors on the color patches.

13. (Thrice Amended) An image processing method performed in a server  
connected, via a communication network, with a host computer and a plurality of image output  
units, each image output unit having a function of updating condition information of the image  
output unit, said method comprising [the steps of]:

an input step of inputting the condition information updated by the plurality of  
image output units;

a storage step of storing the inputted condition information in association with  
each of the plurality of image output units;

a transmission step of transmitting the stored condition information to the host  
computer in accordance with a request for acquiring the condition information issued by the host

computer; and

a management step of managing an image output job of the host computer,

wherein the condition information is obtained by forming color patches and  
measuring colors on the color patches,

wherein the host computer performs image processing of image data in  
accordance with the condition information transmitted in said transmitting step, and

wherein each of the plurality of image output units outputs an image based on the  
image data processed by the host computer.

14. (Thrice Amended) A computer-readable storage medium that stores a  
program for implementing, by a computer, an image processing method, the program  
comprising:

code for a communication function of performing two-way communications with  
an image output unit having [means] an update unit for updating condition information indicating  
a condition of the image output unit and [means] a memory for storing the condition information,  
wherein the condition information is obtained by forming color patches and measuring colors on  
the color patches;

code for an input function of inputting an image output instruction;

code for an acquisition function of acquiring the condition information stored in  
the image output unit by utilizing the two-way communications, in response to the image output

instruction; [and]

code for an image processing function of performing image processing of image data in accordance with the condition information acquired by the acquisition function; and

code for an output function of outputting the image data processed by the image processing function to the image output unit using the communication function in order to make the image output unit output an image.

15. (Thrice Amended) A computer-readable storage medium that stores a program for an image processing method performed by a server connected, via a communication network, with a host computer and a plurality of image output units, each image output unit having a function of updating condition information of the image output unit, the program comprising:

code for an input function of inputting the condition information updated by the plurality of image output units;

code for a storage function of storing the inputted condition information in association with each of the plurality of image output units;

code for a transmission function of transmitting the stored condition information to the host computer in accordance with a request for acquiring the condition information issued by the host computer; and

code for a management function of managing an image output job of the host computer,

wherein the condition information is obtained by forming color patches and

measuring colors on the color patches,

wherein the host computer performs image processing of image data in  
accordance with the condition information transmitted by the transmission function, and  
wherein each of the plurality of image output units outputs an image based on the  
image data processed by the host computer.

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